

**REMARKS**

In view of the following remarks, the Examiner is requested to allow Claims 1-24, 26-54 and 101-146, the only claims pending and under examination in this application after entry of the above amendments.

The specification has been amended to include the subject matter of original Claim 13.

Claims 1, 21, 23, 24, 26 and 53-54 have been amended. Claim 1 has been amended to incorporate the elements of Claim 25. Consequently, Claim 25 has been cancelled. Claims 21, 23 and 24 have been amended to clarify the claim language. Claims 26, 53 and 54 have been amended to correct their dependency. Claims 55 to 100 have been cancelled. New Claims 101-146 have been added. In total, 46 claims have been cancelled and 46 claims have been added.

New Claim 101 is a combination of original Claim 1, 21 and 23. New Claim 102 is derived from original Claim 3. New Claim 103 is derived from original Claim 4. New Claim 104 is derived from original Claim 5. New Claim 105 is derived from original Claim 6. New Claim 106 is derived from original Claim 7. New Claim 107 is derived from original Claim 8. New Claim 108 is derived from original Claim 9. New Claim 109 is derived from original Claim 10. New Claim 110 is derived from original Claim 11. New Claim 111 is derived from original Claim 12. New Claim 112 is derived from original Claim 13. New Claim 113 is derived from original Claim 14. New Claim 114 is derived from original Claim 15. New Claim 115 is derived from original Claim 16. New Claim 116 is derived from original Claim 17. New Claim 117 is derived from original Claim 18. New Claim 118 is derived from original Claim 19. New Claim 119 is derived from original Claim 20. New Claim 120 is derived from original Claim 24. New Claim 121 is derived from original Claim 22. New Claim 122 is derived from original Claim 27. New Claim 123 is derived from original Claim 28. New Claim 124 is derived from

original Claim 29. New Claim 125 is derived from original Claim 30. New Claim 126 is derived from original Claim 31. New Claim 127 is derived from original Claim 32. New Claim 128 is derived from original Claim 33. New Claim 129 is derived from original Claim 34. New Claim 130 is derived from original Claim 35. New Claim 131 is derived from original Claim 36. New Claim 132 is derived from original Claim 37. New Claim 133 is derived from original Claim 38. New Claim 134 is derived from original Claim 39. New Claim 135 is derived from original Claim 40. New Claim 136 is derived from original Claim 41. New Claim 137 is derived from original Claim 42. New Claim 138 is derived from original Claim 43. New Claim 139 is derived from original Claim 44. New Claim 140 is derived from original Claim 45. New Claim 141 is derived from original Claim 46. New Claim 142 is derived from original Claim 47. New Claim 143 is derived from original Claim 48. New Claim 144 is derived from original Claim 49. New Claim 145 is derived from original Claim 50. New Claim 146 is derived from original Claim 51.

Accordingly, no new matter has been added. As no new matter has been added by way of these amendments, entry thereof by the Examiner is respectfully requested.

As an initial matter, the Examiner is thanked for acknowledging the patentability of Claims 23-26.

#### *Interview Summary*

Applicants additionally thank the Examiner for the interview that was held on August 1, 2006, during which Claims 7, 13, 23 and 25 were discussed. Pursuant to the interview, the Applicants have amended the disclosure of the application to include the subject matter of Claim 13, have amended Claim 1 to recite the elements of Claim 25 and have added new claims 101-146 directed to the subject matter of Claim 23 in independent format, as discussed.

***Claim Rejections – 35 U.S.C. § 112, first paragraph***

Claims 13-15 have been rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement. The Applicants have amended the specification to include the subject matter of original Claim 13 which recites measuring a blood oxygen concentration in a patient having a shunt. Accordingly, in view of the amendment to the specification this rejection may be withdrawn.

***Claim Rejections – 35 U.S.C. § 103***

Claims 1-11, 16-20, 27-45 and 47-52 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Mulligan et al. (USPN 6,438,408) in view of Bennett et al. (USPN 5,213,098).

Claim 1 has been amended to incorporate the elements of Claim 25, which the Examiner has found to be allowable. Accordingly, Claim 1 as amended, as well as Claims 2-11, 16-20, 27-45 and 47-52 which ultimately depend from Claim 1, are all patentably distinct over the cited art and therefore the Applicants respectfully request that this rejection be withdrawn.

Claim 12 has been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Mulligan et al. in view of Bennett et al., and further in view of Orth (USPN 5,423,323). Claim 12 ultimately depends from Claim 1. As set forth above, Claim 1 has been amended to include the elements of Claim 25, which the Examiner has found to be allowable. Accordingly, in view of the amendments to Claim 1, this rejection may be withdrawn.

Claims 21 and 22 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Mulligan et al. in view of Bennett et al., and further in view of Nappholz et al. (USPN 5,188,106). Claims 21 and 22 ultimately depend from Claim 1. As set forth above, Claim 1 has been amended to include the elements of Claim 25, which the Examiner has found to be allowable. Accordingly, in view of the amendments to Claim 1, this rejection may be withdrawn.

Claims 46, 53 and 54 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Mulligan et al. in view of Bennett et all, and further in view of Meador et al., (USPN 6,234,973). With respect to Claim 46, Claim 46 ultimately depends from Claim 1. With respect to Claims 53 and 54, these claims have been amended to depend from Claim 1. As set forth above, Claim 1 has been amended to include the elements of Claim 25, which the Examiner has found to be allowable. Accordingly, in view of the amendments to Claim 1, this rejection may be withdrawn.

### ***New Claims***

New Claims 101-146 have been added. New Claims 101-146 recite the elements of original Claim 23 in independent format. The Examiner has indicated that Claim 23 would be allowable if rewritten in independent format. Accordingly, the Applicants contend that new Claims 101-146 are patentable over the prior art.

**CONCLUSION**

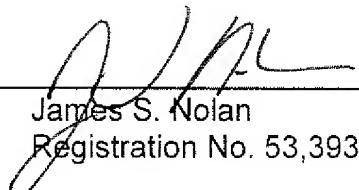
Applicants submit that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone the undersigned at the number provided.

The Commissioner is hereby authorized to charge any underpayment of fees associated with this communication, including any necessary fees for extensions of time, or credit any overpayment to Deposit Account No. 50-0815, order number PRTS-038US2.

Respectfully submitted,  
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